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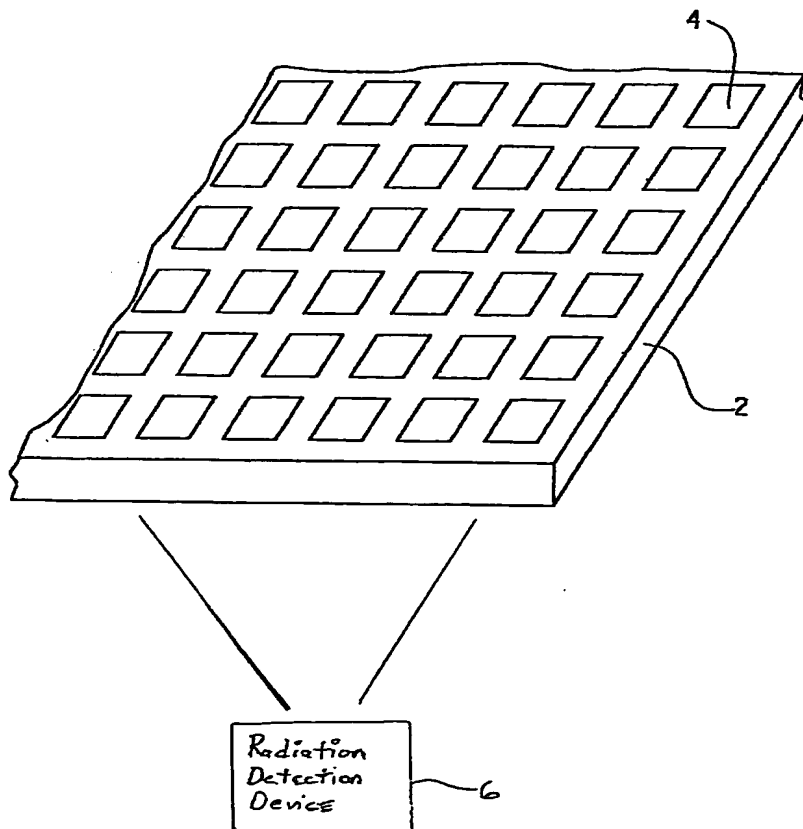
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(54) Title: RADIATION DETECTOR CRYSTAL AND METHOD OF FORMATION THEREOF



(57) Abstract: A radiation detector crystal is made from $CdxZn_{1-x}Te$, where $0 \leq x \leq 1$; an element from column III or column VII of the periodic table, desirably in a concentration of about 1 to 10,000 atomic parts per billion; and the element Ruthenium (Ru), the element Osmium (Os) or the combination of Ru and Os, desirably in a concentration of about 1 to 10,000 atomic parts per billion using a conventional crystal growth method, such as, for example, the Bridgman method, the gradient freeze method, the electro-dynamic gradient freeze method, the so-call traveling heater method or by the vapor phase transport method. The crystal can be used as the radiation detecting element of a radiation detection device configured to detect and process, without limitation, X-ray and Gamma ray radiation events.



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